

Attorney Docket No. P13736-US2  
Customer Number 27045

### **REMARKS/ARGUMENTS**

#### **1.) Claim Amendments**

The Applicants have canceled original claims 1-49 and added new claims 50-76. Accordingly, claims 50-76 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

#### **2.) Claim Rejections – 35 U.S.C. § 103(a)**

In paragraphs 3-4 of the Office Action, the Examiner rejected claims 1-3, 6, 8, 9, 10-16, 18, 38 and 40-44 under 35 U.S.C. § 103(a) as being unpatentable over Goyal, et al. (US 6,785,233) in view of Pan, et al. (US 6,760,306). The Applicants have canceled claims 1-3, 6, 8, 9, 10-16, 18, 38 and 40-44, and have added new claims to better distinguish the claimed invention from Goyal and Pan. The Examiner's consideration of the amended claims is respectfully requested.

Goyal and Pan both describe systems and methods in which edge routers are used to reserve resources for QoS purposes. The Applicants' claimed invention removes this function from the edge routers and performs dynamic QoS provisioning in an enhanced bandwidth broker that is not taught or suggested by Goyal or Pan.

#### **New Claims 50-63**

New claim 50 recites a method of providing dynamic QoS in an IP network that uses Resource Reservation Protocol (RSVP) aggregation and includes a region using an Integrated Services (Intserv) architecture connected to a region using a Differentiated Services (Diffserv) architecture. The Intserv region includes an edge router, and the Diffserv region includes a border router and a core router. The method includes the steps of:

interfacing a bandwidth broker with the edge router in the Intserv region and the border router in the Diffserv region, said bandwidth broker communicating directly with the border router without communicating with the core router in the Diffserv region;

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providing Intserv-to-Diffserv interoperability by the edge router in the Intserv region and the bandwidth broker, by preventing the border router and the core router in the Diffserv region from processing RSVP messages;

storing and managing RSVP aggregation states in the bandwidth broker using the RSVP aggregation protocol; and

managing dynamic provisioning of QoS in the Diffserv region using the bandwidth broker.

Performing these functions in a bandwidth broker is not taught or suggested by Goyal or Pan. Basis for new claim 50 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11, and original claim 1. Therefore, the allowance of claim 50 is respectfully requested.

Claims 52-63 depend from claim 50 and recite further limitations in combination with the novel and unobvious elements of claim 50. Basis for claims 52-63 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11; and original claims 2-13. Therefore, the allowance of claims 52-63 is respectfully requested.

#### New Claims 64-70

New claim 64 recites a bandwidth broker for providing dynamic QoS in an IP network that uses RSVP aggregation and includes a region using an Intserv architecture connected to a region using a Diffserv architecture. The Intserv region includes an edge router, and the Diffserv region includes a border router and a core router. The bandwidth broker comprises:

means for interfacing with the edge router in the Intserv region and with the border router in the Diffserv region, said bandwidth broker communicating directly with the border router without communicating with the core router in the Diffserv region;

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means for tunneling RSVP messages to a second bandwidth broker, thereby preventing the border router and the core router in the Diffserv region from processing the RSVP messages;

means for storing and managing RSVP aggregation states using the RSVP aggregation protocol; and

means for managing dynamic provisioning of QoS in the Diffserv region.

A bandwidth broker that performs these functions is not taught or suggested by Goyal or Pan. Basis for new claim 64 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11, and original claim 1. Therefore, the allowance of claim 64 is respectfully requested.

Claims 65-70 depend from claim 64 and recite further limitations in combination with the novel and unobvious elements of claim 64. Basis for claims 65-70 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11; and original claims 2-13 and 36-49. Therefore, the allowance of claims 65-70 is respectfully requested.

#### New Claims 71-76

New claim 71 recites a network subsystem for providing dynamic QoS in an IP network that uses RSVP aggregation and includes a region using an Intserv architecture connected to a region using a Diffserv architecture. The network subsystem comprises:

an edge router in the Intserv region;

a border router and a core router in the Diffserv region; and

a bandwidth broker that interfaces the edge router in the Intserv region with the border router in the Diffserv region, said bandwidth broker comprising:

means for communicating directly with the border router in the Diffserv region without communicating with the core router in the Diffserv region;

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means for tunneling RSVP messages to a second bandwidth broker, thereby preventing the border router and the core router in the Diffserv region from processing the RSVP messages;

means for storing and managing RSVP aggregation states using the RSVP aggregation protocol; and

means for managing dynamic provisioning of QoS in the Diffserv region.

A network subsystem that performs these functions is not taught or suggested by Goyal or Pan. Basis for new claim 71 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11, and original claims 1 and 36. Therefore, the allowance of claim 71 is respectfully requested.

Claims 72-76 depend from claim 71 and recite further limitations in combination with the novel and unobvious elements of claim 71. Basis for claims 72-76 is found in the originally filed application on page 18, lines 10-23; page 20, line 6 through page 21, line 17; page 34, line 5 through page 35, line 8; FIG. 11; and original claims 2-13 and 36-49. Therefore, the allowance of claims 72-76 is respectfully requested.

In paragraph 6 of the Office Action, the Examiner rejected claims 4, 5, 7, 9, 17, 39 and 45 under 35 U.S.C. § 103(a) as being unpatentable over Goyal-Pan, and further in view of Soumiya, et al. (US 6,760,774). The Applicants have canceled claims 4, 5, 7, 9, 17, 39 and 45, and have added new claims to better distinguish the claimed invention from Goyal, Pan and Soumiya. The Applicants note that, like Goyal and Pan, Soumiya discloses a boundary apparatus that performs resource reservations. Thus, Soumiya also fails to teach or suggest a method, bandwidth broker, or network subsystem that performs the claimed functions in a bandwidth broker rather than a boundary apparatus. Therefore, the allowance of new claims 50-76 is respectfully requested.

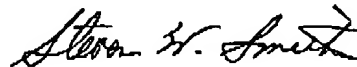
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**CONCLUSION**

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicants, therefore, respectfully request that the Examiner withdraw all rejections and issue a Notice of Allowance for claims 50-76.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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